YIN (IRENE) LIN

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EDUCATION

Shanghai Jiao Tong University, China (SJTU) Sep. 2015 – Jun. 2019 (Expected)
B.S. in Computer Science (CS) GPA: **3.84**/4.3, (**89.92**/100)
Core Courses: C++ Programming (96) , Project Workshop of Operating Systems (98) , Computer Networks (95) , Operating Systems (96) , Information Theory and Coding Technology (94) , Computer System Architecture (94) , Advanced Data Management (90) , Machine Learning (96) , Artifical Intelligence (94)

University of Waterloo, Canada Jul. 2018 – Oct. 2018
Research Intern in Software Architecture Group, School of Computer Science (Advisor: Prof. Meiyappan Nagappan.)
Graduate Seminar: Graph Data Management (Prof. Semih Salihoglu)

GRE:157+168+4.0, TOEFL: 108 (R:28, L:30, S:22, W:28)

RESEARCH INTERESTS

Database, Distributed Systems, Computer Architecture

PUBLICATIONS

[1] **Yin Lin**, Xinyi Chen, Xiaofeng Gao, Bin Yao, Guihai Chen, R^2-Tree: An Efficient Indexing Scheme for Data Center Network, in *International Conference on Database and Expert Systems Applications (DEXA), 2018* (Oral Presentation).

[2] **Yin Lin**, Xinyi Chen and Paulo Weng, MetisRL: A Reinforcement Learning Approach for Dynamic Routing in Data Center Networks, submitted to *IEEE International Conference on Computer Communications(INFOCOM), 2019*.

[3] Jiaping Gui, **Yin Lin**, Meiyappan Nagappan, William G.J. Halfond, Understanding the Relationship Between Mobile Ad Usage and App Ratings in Android Apps, submitted to *ACM SIGSOFT Symposium on the Foundation of Software Engineering/ European Software Engineering Conference (FSE/ESEC), 2019*.

RESEARCH EXPERIENCES

R2-Tree: Scalable Indexing Schemes for High Dimensional Data Dec. 2016 – Feb. 2018
Shanghai Jiao Tong University Advisor: Prof. Xiaofeng Gao

- Proposed a scalable indexing scheme called R2-Tree for high dimensional data in data centers.
- Employed the two-layer indexing framework to maintain a global index layer above the structured overlay.
- Used R-Tree to support both point, range query and used bloom filter to reduce the false positive.
- Implemented the indexing scheme to upto 64 instances on Amazon's EC2 platform, using socket communication to simulate the physical link of different data center network topologies.

Using Machine Learning to Reduce Index Reconstructions on HUAWEI Data Centers Aug. 2018 - present
Shanghai Jiao Tong University Advisor: Prof. Xiaofeng Gao, Jun Zhao (HUAWEI engineer)

- Using machine learning prediction to correct skew and erroneous data in the storage system for Industrial & Commercial Bank of China provided by HUAWEI.
- Automatically reconstructing the index for the database and reduce the human effort in maintaining the storage system.

MertisRL: Dynamic Data Center Flow Scheduling Scheme Dec. 2017 – Jun. 2018
Shanghai Jiao Tong University Advisor: Prof. Xiaofeng Gao

- Used Reinforcement learning (RL) algorithm to dynamically compute the data flow scheduling scheme.
- Utilized Mininet to simulate SDN centralized control to implement the flow scheduling scheme to the Fat-tree data center topology.

Mining Software Repositories Jun. 2018 – Oct.2018

University of Waterloo Advisor: Prof. Meiyappan Nagappan

- Conducted an A/B test to investigate how different mobile ads usage pattern could affect the user's feeling of mobile apps. This test provides guidance for users of Google Mobile Ads SDK.
- Investigated the usage of tools proposed in the demo and research track of ICSE 2014-2018. Classified the tools in the papers by their purpose, programming language, availability and so on, then built a website to make the tools more easily accessible for software developers.

SELECTED AWARDS

Meritorious Winner Prise, Mathematical Contest in Modeling *twice, top 10% worldwide*	2017,2018
Chun Tsung Scholar from Shanghai Jiao Tong University *60/˜2400, top 2% in SJTU*	2017
Yitu Scholarship *4/139 top 3% in CS department*	2017
Huawei Scholarship *7/139, top 6% in CS department*	2017
Academic Scholarship from Shanghai Jiao Tong University *top 10% in SJTU*	2017
Shanghai Jiao Tong Univerisity Merit Student *twice*	2017,2018
Cyrus Tang Scholarship *for outstanding volunteer work*	2017

TECHNICAL SKILLS

Programming: C/C++, Java, Python, Bash, HTML/CSS/JS, SQL

ACADEMIC SERVICES

The 11th International Conference on Combinatorial Optimization & Applications (COCOA), Shanghai, China,
Organization Staff and Emcee of Conference Banquet Dec. 2017

TEACHING EXPERIENCES

CS499, Mathematical Foundations of Computer Science
Teaching Assistant. *Instructor: Prof. Dominik Scheder* Spring 2018